

5 WHAT IS CLAIMED IS:

1. A system for controlling transmission of data packets through an information network, comprising:

a Regional Transaction Processor (RTP); and

a data Enabling Device (DED) operable to:

10 receive one or more data packets from the information network,

detect when the one or more data packets include content match information, and

15 issue a message to a workstation and invoke the RTP to process a transaction when the content match information is detected in the one or more data packets.

2. The system as set forth in claim 1, wherein the transaction processed is based on the content match information.

3. The system, as set forth in claim 1, wherein the DED is operable to detect when the one or more data packets include content match information at a rate  
20 proportional to the rate at which the data packets are received.

4. The system, as set forth in claim 1, wherein the DED prevents further transmission of the one or more data packets based on the content match information.

5. The system, as set forth in claim 1, wherein the RTP comprises a network server and a database, and is operable to process transactions for requests for content.

25 6. The system, as set forth in claim 1, wherein the DED is located at a network access point (NAP).

7. The system, as set forth in claim 1, further comprising a plurality of DEDs along a network route, wherein each DED is operable to communicate with at least one of the other DEDs.

5           8. The system, as set forth in claim 7, wherein the plurality of DEDs include a first DED that generates a message and one or more intermediate DEDs operable to forward the message to the DED closest to the workstation along the network route.

9. The system, as set forth in claim 7, wherein the plurality of DEDs are operable to communicate with each other to prevent transmitting more than one message for the same data packet through the network route.

10          10. The system, as set forth in claim 1, wherein the RTP transmits a Release\_Content or Cease\_Content message to the DED, based on whether the at least one data packet was authorized to be downloaded to the workstation.

11. The system, as set forth in claim 1, wherein the DED includes Field Programmable Gate Arrays (FPGAs).

12. The system, as set forth in claim 11, wherein the FPGAs can be reprogrammed over the network to perform a content matching function.

13. The system, as set forth in claim 11, wherein a portion of the DED can be dynamically reprogrammed and the DED is operable to continue processing the data packets during the partial reprogramming.

14. The system, as set forth in claim 1, further comprising a Central Storage and Backup System (CSBS) operable to communicate with the RTP, to monitor operation of the RTP, and to store transaction information.

15. The system, as set forth in claim 14, wherein the CSBS is operable to transmit information to reprogram the DED to communicate with another RTP.

16. The system, as set forth in claim 1, further comprising a content matching server operable to store content match information, to communicate with the DED, and to transmit the content match information to the DED.

17. The system, as set forth in claim 1, wherein the DED is operable to suspend transmission of the data packets through the information network until a response to a prompt is received.

5           18. A method for controlling transmission of identifiable content over an information network, comprising:

          providing content match information for the content to a DED, wherein the DED  
          is located in the information network along a transmission path of a  
          plurality of data packets, wherein at least one data packet includes the  
10           content match information;

          receiving the at least one data packet in the DED;

          detecting the content match information in the at least one data packet in the  
          DED; and

          issuing a prompt to a workstation based on the content match information when  
15           the content match information is detected in the at least one data packet.

19. The method as set forth in claim 18, wherein the prompt is based on the content match information.

20. The method, as set forth in claim 18, further comprising: preventing further transmission of the one or more data packets based on the content match information.

20           21. The method, as set forth in claim 18, further comprising: processing a transaction based on a user's response to the prompt.

22. The method, as set forth in claim 18, further comprising transmitting a message among a plurality of DEDs along the transmission path to prevent transmitting more than one prompt for the same data packet.

25           23. The method, as set forth in claim 18, further comprising: processing a transaction based on the content match information, and transmitting a Release\_Content or Cease\_Content message to the DED based on whether content was authorized to be downloaded to the workstation during the transaction.

30           24. The method, as set forth in claim 18, further comprising: reprogramming a portion of the DED to detect different content match information.

5           25. The method, as set forth in claim 18, further comprising suspending transmission of the at least one data packet through the information network until a response to the prompt is received.

26. A computer program product comprising:  
program instructions to implement the method of claim 18.

10           27. A data signal comprising:  
program instructions to implement the method of claim 18.

28. An apparatus for controlling transmission of identifiable content over an information network, comprising:

15           means for providing content match information for the content to a DED, wherein the DED is located in the information network along a transmission path of a plurality of data packets, wherein at least one data packet includes the content match information;

            means for receiving the at least one data packet in the DED;

20           means for detecting the content match information in the at least one data packet in the DED, and

            means for issuing a prompt to a workstation based on the content match information when the content match information is detected in the at least one data packet.

25           29. The apparatus as set forth in claim 28, further comprising means for generating the prompt based on information in the at least one data packet.

30           30. The apparatus, as set forth in claim 28, further comprising: means for preventing further transmission of the one or more data packets based on information in the at least one data packet.

31. The apparatus, as set forth in claim 28, further comprising: means for processing a transaction based on a user's response to the prompt.

5           32. The apparatus, as set forth in claim 28, further comprising: means for transmitting a message among a plurality of DEDs along the transmission path to prevent transmitting more than one prompt for the same packet.

10           33. The apparatus, as set forth in claim 28, further comprising: means for processing a transaction based on the content match information, and means for transmitting a Release\_Content or Cease\_Content message to the DED based on whether content was authorized to be downloaded to the workstation during the transaction.

          34. The apparatus, as set forth in claim 28, further comprising: means for reprogramming a portion of the DED to detect different content match information.

15           35. The apparatus, as set forth in claim 28, further comprising: means for suspending transmission of the at least one data packet through the information network until a response to the prompt is received.

          36. An apparatus for controlling transmission of data packets in an information network, comprising:

- 20           a Regional Transaction Processor (RTP) operable to communicate with a Data Enabling Device (DED) and at least one workstation, wherein the DED is operable to detect content match information in at least one of the data packets, and further wherein the RTP comprises:
- instructions operable to generate information to include in a prompt to be presented at the workstation, wherein the prompt is based on information in the at least one data packet.
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          37. The apparatus as set forth in claim 36, wherein the DED is operable to detect the content match information at a rate proportional to the rate at which the data packets are received.

30           38. The apparatus, as set forth in claim 36, wherein the DED is operable to prevent further transmission of one or more of the data packets based on the information in the at least one data packet.

39. The apparatus, as set forth in claim 36, wherein the RTP further comprises: instructions operable to process a transaction based on the information in the at least one data packet.

40. The apparatus, as set forth in claim 36, wherein a plurality of DEDs are positioned along a network route, and further wherein each DED is operable to communicate with at least one of the other DEDs.

41. The apparatus, as set forth in claim 40, wherein the plurality of DEDs include a first DED that generates a message and one or more intermediate DEDs operable to forward the message to the DED closest to the workstation along the network route.

42. The apparatus, as set forth in claim 40, wherein the plurality of DEDs are operable to communicate with each other to prevent transmitting more than one message for the same data packet through the network route.

43. The apparatus, as set forth in claim 39, wherein the RTP is further operable to transmit a Release\_Content or Cease\_Content message to the DED, based on whether the at least one data packet was authorized to be downloaded to the workstation during the transaction.

44. The apparatus, as set forth in claim 36, wherein a portion of the DED can be dynamically reprogrammed and the DED is operable to continue processing packets during the partial reprogramming.

45. The apparatus, as set forth in claim 39, wherein the RTP is operable to communicate with a Central Storage and Backup System (CSBS), wherein the CSBS is operable to monitor operation of the RTP, and to store transaction information.

46. The apparatus, as set forth in claim 45, wherein the CSBS is operable to transmit information to reprogram the DED to communicate with another RTP.

47. The apparatus, as set forth in claim 36, wherein the RTP is operable to communicate with a content matching server, wherein the content matching server is

- 5 operable to store content match information, to communicate with the DED, and to transmit the content match information to the DED.

48. The apparatus, as set forth in claim 36, wherein the DED is further operable to suspend transmission of the at least one data packet through the information network until a response to the prompt is received.

- 10 49. An apparatus comprising:

a Central Storage and Backup System (CSBS) operable to communicate with a plurality of Regional Transaction Processors (RTPs) and to provide backup storage for the RTPs, wherein the RTPs are operable to communicate with a Data Enabling Device (DED) and at least one workstation, wherein the DED is operable to detect content match information in at least one data packet, and further wherein the RTP comprises:

instructions operable to generate information to include in a prompt to be presented at the workstation, wherein the prompt is based on information in the data packet.

50. The apparatus, as set forth in claim 49, wherein CSBS is further operable to monitor the operation of the RTPs.

51. The apparatus, as set forth in claim 49, wherein the CSBS stores transaction information for the RTPs.

25 52. The apparatus, as set forth in claim 49, wherein the CSBS maintains the content match information.

53. A computer program product comprising:

instructions to enable communication between a workstation, a Data Enabling Device (DED), and a Regional Transaction Processor (RTP), wherein the DED is operable to detect content match information in at least one data packet and to prevent further transmission of one or more data packets based on the information in the at least one data packet, and further

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wherein the RTP is operable to generate information to include in a prompt to be presented at the workstation, wherein the prompt is based on information in the at least one data packet.

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